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B TECH
(SEM V) THEORY EXAMINATION 2017-18
PRODUCTION PLANNING AND CONTROL

*Time: 3 Hours**Total Marks: 100***Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x10 = 20**

- a. Define Production systems.
- b. Define breakeven point and margin of safety
- c. Differentiate between routing and scheduling.
- d. Write down the function of PPC?
- e. Define expediting.
- f. Define line balancing.
- g. Differentiate between event and activity?
- h. What do you mean master production schedule?
- i. Define the term re-order point and lead time?
- j. Define critical path.

SECTION B**2. Attempt any three of the following:****10 x 3 = 30**

- a. What is sales forecasting
The demand for disposable plastic tubing for general hospital is 300 units and 350 units for September and October respectively. Using 200 units demand for September compute the forecast for the month of November. Assume the value of smoothing constant is 0.7.
- b. For a particular product the following information is given
Selling price per unit: Rs. 10
Variable cost per unit: Rs.6
Fixed cost: Rs.1,00,0000.
Due to inflation variable cost increase by 10% while fixed cost increased by 5%. If the break even quantity is remain constant by what percentage should the sales price to be raised.
- c. Explain with block diagram the outline of function of production control.
- d. Draw the network and determine EST.EFT.LST, LFT of the activities. Also identify the critical path.

Activity:	1-2	1-4	1-7	2-3	3-5	4-6	4-8	5-6	6-9	7-8	8-9
Duration (days):	2	2	1	4	1	5	8	4	3	3	3

- e. Explain Material Requirement Planning (MRP).

SECTION C

3. **Attempt any one part** (10*1=10)
 a. Classify the production systems. Explain each.
 b. Explain the steps involved in capacity planning. Also discuss the various factors influencing capacity planning.
4. **Attempt any one part** (10*1=10)
 a. Explain profit volume curve
 A manufacturing firm incurs a fixed cost of Rs.18000. The variable cost accounts Rs.8 per unit and selling price is Rs.13. find the number of pieces to be produced to break even.
 b. Define process planning. What are activities associated with it.
5. **Attempt any one part** (10*1=10)
 a. Define scheduling. What are the principles of scheduling? Also explain scheduling strategies.
 b. What is priority sequencing? What are the criteria for priority sequencing.
6. **Attempt any one part** (10*1=10)
 a. Explain Fulkerson rule .bring out the difference between PERT and CPM.
 b. The PERT time estimates of the project are given.construct the PERT network and find critical path and variance of each event.

ACTIVITY	OPTIMISTIC TIME	MOST EXPECTED TIME	PRESSIMISTIC TIME
1-2	1	5	2
2-3	1	3	2
2-4	1	5	3
3-5	3	5	4
4-5	2	4	3
4-6	3	7	5
5-7	4	6	5
6-7	6	8	7
7-8	2	6	4
8-10	1	3	2
9-10	3	7	3

7. **Write the short notes on any two of the following:** (5*2=10)
 (i) MRP-II
 (ii) ABC Analysis
 (iii) Buffer stock and re-order point
 (iv) ERP